

Notice of Allowability

Application No.

10/520,417

Examiner

John S. Chu

Applicant(s)

KANATANI ET AL.

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/4/07.
2. ☒ The allowed claim(s) is/are 1-7 and 9-12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: The claimed invention is drawn to the following:

1. (Currently amended) A negative type photosensitive resin

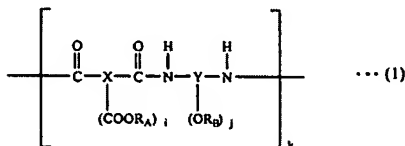
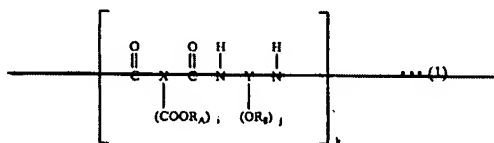
composition which comprises:

(A) 100 parts of a polyamide having a structural unit represented by the following formula (1) and having a photopolymerizable unsaturated double bond: ~~400 parts by mass,~~

(B) 1-50 parts of a monomer having a photopolymerizable unsaturated double bond: ~~1-50 parts by mass,~~

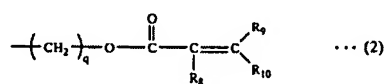
(C) 1-20 parts of a photopolymerization initiator: ~~1-20 parts by mass,~~ and

(D) 5-30 parts of a melamine resin: ~~5-30 parts by mass,~~

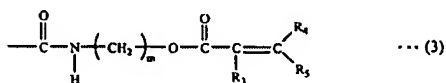


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(where X is a 2-4 valent aromatic group and Y is a 2-4 valent aromatic group, i and j are integers of 0-2 and satisfy $i + j = 2$, k is an integer of 2-150, R_A is independently a monovalent organic group having a photopolymerizable unsaturated double bond and represented by the following formula (2) or a saturated aliphatic group of 1-4 carbon atoms, and R_B is independently a hydrogen atom or a monovalent organic group having a photopolymerizable unsaturated double bond and represented by the following formula (3), with the proviso that when the total mol number of R_B is assumed to be 100 mol%, not less than 10 mol% and not more than 50 mol% thereof is the monovalent organic group having a photopolymerizable unsaturated double bond and represented by the following formula (3).



where R_8 is a hydrogen atom or an organic group of 1-3 carbon atoms, R_9 and R_{10} are independently a hydrogen atom or an organic group of 1-3 carbon atoms, and q is an integer of 2-10.



where R_3 is a hydrogen atom or an organic group of 1-3 carbon atoms, R_4 and R_5 are independently a hydrogen atom or an organic group of 1-3 carbon atoms, and m is an integer of 2-10).

None of the prior art references disclose the particularly claimed negative type photosensitive resin composition comprising the components (A) – (D). The closest prior art references of record have been overcome as indicated in the last Office action mailed October 4, 2006.

Accordingly, claims 1-7 and 9-12 are seen as allowable and passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. CZORNYL et al (5,446,074) and HAGIWARA et al (5,472,823) are cited of interest. CZORNYL et al discloses a photosensitive poly(amic) acid resin , however the "X" group is attached by an amide linkage to the polymer backbone through an amine group, while the claimed invention recites that the R_B is attached through a hydroxyl group. Further the reference lacks a melamine crosslinking agent.

HAGIWARA et al lacks a melamine crosslinking ingredient in the composition as claimed.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

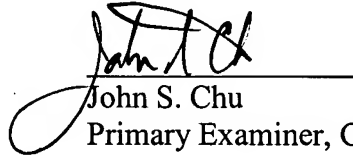
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John S. Chu
Primary Examiner, Group 1700

J.Chu
March 21, 2007